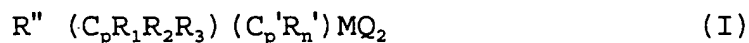


WHAT IS CLAIMED IS:

1. Use of isotactic polypropylene homopolymers or copolymers in processes in which the polypropylene solidifies from a melt, wherein for enhanced speed of solidification of the polypropylene the polypropylene has a melt temperature and a crystallisation temperature not more than 50°C less than the melt temperature resulting from the polypropylene having been produced using a metallocene catalyst component having the general formula:



wherein  $C_p$  is a substituted cyclopentadienyl ring;  $C_p'$  is a substituted or unsubstituted fluorenyl ring;  $R''$  is a structural bridge imparting stereorigidity to the component;  $R_1$  is a substituent on the cyclopentadienyl ring which is distal to the bridge, which distal substituent comprises a bulky group of the formula  $XR^*_a$  in which  $X$  is chosen from Group IVA, and when  $a=3$  each  $R^*$  is the same or different and chosen from hydrogen or hydrocarbyl of from 1 to 20 carbon atoms, or when  $a=2$  one  $R^*$  is chosen from hydrogen or hydrocarbyl of from 1 to 20 carbon atoms and the other different  $R^*$  is chosen from a substituted or unsubstituted cycloalkyl where  $X$  is a carbon atom in the cycloalkyl ring,  $R_2$  is a substituent on the cyclopentadienyl ring

which is proximal to the bridge and positioned non-vicinal to the  
2 distal substituent and is hydrogen or of the formula  $YR\#_3$  in  
3 which Y is chosen from Group IVA, and each  $R\#$  is the same or  
4 different and chosen from hydrogen or hydrocarbyl of 1 to 7  
5 carbon atoms,  $R_3$  is a substituent on the cyclopentadienyl ring  
6 which is proximal to the bridge and is a hydrogen atom or is of  
7 the formula  $ZR\$_3$  in which Z is chosen from Group IVA, and each  $R\$_$   
8 is the same or different and chosen from hydrogen or hydrocarbyl  
9 of 1 to 7 carbon atoms, each  $R'_n$  is the same or different and is  
10 hydrocarbyl having 1 to 20 carbon atoms in which  $0 \leq n \leq 8$ ; M is a  
11 Group IVB transition metal or vanadium and each Q is hydrocarbyl  
12 having 1 to 20 carbon atoms or is a halogen.

2. Use according to claim 1, wherein  $R_1$  is a methyl-  
2 cyclohexyl group.

3. Use according to claim 1 wherein  $R_1$  is a tertiary butyl  
2 group.

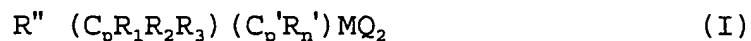
4. Use according to claim 2 or claim 3 wherein  $R_2$  is a  
2 methyl group.

5. Use according to claim 2 or claim 3 wherein  $R_2$  is  
2 hydrogen.

6. Use according to any foregoing claim wherein each R' is hydrogen.

7. Use according to any foregoing claim wherein Y is carbon.

8. A process for producing an isotactic homopolymer of propylene having a melt temperature of from 139 to 144°C and a difference between the melt temperature and the crystallisation temperature of not more than 50°C, the process comprising homopolymerising propylene in the presence of a metallocene catalyst of general formula:



wherein  $C_p$  is a substituted cyclopentadienyl ring;  $C_p'$  is a substituted or unsubstituted fluorenyl ring;  $R''$  is a structural bridge imparting stereorigidity to the component;  $R_1$  is a substituent on the cyclopentadienyl ring which is distal to the bridge, which distal substituent comprises a bulky group of the formula  $XR^*_a$  in which X is chosen from Group IVA,  $a=2$ , and one  $R^*$  is chosen from hydrogen or hydrocarbyl of from 1 to 20 carbon atoms and the other different  $R^*$  is chosen from a substituted or unsubstituted cycloalkyl where X is a carbon atom in the cycloalkyl ring,  $R_2$  is a substituent on the cyclopentadienyl ring

which is proximal to the bridge and positioned non-vicinal to the  
2 distal substituent and is of the formula  $YR_{\#}$ , in which Y is  
3 chosen from Group IVA, and each  $R_{\#}$  is the same or different and  
4 chosen from hydrogen or hydrocarbyl of 1 to 7 carbon atoms,  $R_3$  is  
5 a substituent on the cyclopentadienyl ring which is proximal to  
6 the bridge and is a hydrogen atom or is of the formula  $ZR_{\$}$ , in  
7 which Z is chosen from Group IVA, and each  $R_{\$}$  is the same or  
8 different and chosen from hydrogen or hydrocarbyl of 1 to 7  
9 carbon atoms, each  $R'_n$  is the same or different and is hydrocarbyl  
10 having 1 to 20 carbon atoms in which  $0 \leq n \leq 8$ ; M is a Group IVB  
11 transition metal or vanadium and each Q is hydrocarbyl having 1  
12 to 20 carbon atoms or is a halogen.

9. A process according to claim 8 wherein  $R_1$  is a methyl-  
2 cyclohexyl group.

10. A process according to claim 9 wherein  $R_2$  is a methyl  
2 group.